



TRANSFORMATION TRENDS—12 AUGUST ISSUE

“We need faster, more agile, more balanced, more interoperable joint forces. We don’t need services running off in four directions, and then, when the balloon goes up, wondering why they aren’t as effective as a joint force as they could be. Or, even worse, why the phone doesn’t ring, and they’re left behind.”

Donald Rumsfeld, Secretary of Defense

Defense Trends:

Congress Key to Transformation—Working with the Congress and the defense industry is critical to the success of DoD transformation efforts, says Art Cebrowski, director of the Pentagon’s Office of Force Transformation. “Neither the Congress nor industry appreciates surprises. Transformation certainly has to take that into account and work with both of these important groups. Given advanced information, and a working relationship, both Congress and defense firms can respond.” OFT intends to begin an outreach effort with legislators and their staffs interested in transformation issues.

Army Talks Transformation—When the Army’s leaders, particularly Vice Chief of Staff Gen. John Keane, talk about the “non-contiguous battlefield” and “converting every engagement into an ambush,” that is new, transformational thinking, says Cebrowski. Talking about a non-contiguous battlefield implies there is no longer a front line and longstanding issues like fire support coordination lines and phase lines are no longer relevant, Cebrowski said. “That is highly transformational. This is overturning 5,000 years of army history.”

JFCOM: Watchword is Transformation—The changes to the Unified Command Plan will now allow the JFCOM commander to “concentrate the majority of his attention on transformation,” Adm. Edmund Giambastiani, new head of the command said in response to Senate questions on his nomination. In addition, Giambastiani said Cebrowski’s office “will be a key partner in transforming our military capabilities” and that he envisioned

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the Office of Force Transformation playing a “key bridging function between the security strategy and policy and acquisition and the effort to identify transformational operational warfighting concepts, requirements and capabilities.”

DoD Appeals Congressional Budget Actions—The Pentagon is contesting several provisions Congress added to the FY2003 budget, that the department feels could slow or impact transformation efforts. Senate provisions for oversight of Pathfinder programs would add “duplicative and burdensome oversight,” according to the Pentagon appeal. Likewise, the department rejects Senate language that would create pilot programs for use of spiral development, which the entire department is embracing, since it would create additional oversight reviews. The DoD is also appealing cuts in the Robust Nuclear Earth Penetrator program, bandwidth expansion for the Global Information Grid, cuts for research into Advanced Aerospace Systems that fund UAV and UCAV efforts, and information fusion efforts in various intelligence programs.

FCS Cannon Version Emerges—The Army requires additional resources in order to field an FCS Cannon version by 2008 to ensure its organic fire requirements are met in the wake of the Crusader cancellation, according to the service’s report to Congress on the issue. “The acceleration of existing programs alone will not fully meet the operational requirement for organic, indirect fires by 2008,” Gen. Eric Shinseki, Army Chief of Staff, said. An additional \$220 million is required to move the FCS Cannon into the overall Future Combat System effort.

Australia Pushes Interoperability—Solving interoperability issues between the United States and its forces is a costly and growing challenge for Australia, Robert Hill, defense minister, said in an interview with *Defense News*. “It’s working well, but it has required, in the communications area, significant additional investment by us,” Hill said. Australian forces participating with the U.S. Navy in enforcing a maritime blockade in the Persian Gulf against Iraq have been at the forefront of interoperability issues and this is translating into different requirements for future combat capabilities. “There’s no point to acquire air warfare destroyers that are not going to interoperable with the United States,” Hill said.

Deepwater Transforms Coast Guard—Development of the Deepwater program is critical to Coast Guard transformation efforts as well as being the centerpiece of enhanced maritime homeland security efforts, says Adm. Thomas Collins, Coast Guard Commandant. Under Deepwater, the Coast Guard will procure 91 different ships, 35 aircraft, 34 helicopters, and 76 UAVs, in addition to upgrades to 49 current cutters and 93 helicopters. “These are the transformational tools necessary to create an effective, layered defense of our nation’s maritime interests in the 21st century,” Collins said in a speech.



Commercial Trends:

Toys Fuel High-Tech—Toys could be the engine for future high technology growth and this segment is listed as one of 25 “Ideas for a Changing World” special section in the latest issue of *Business Week* magazine. Toys are now on the cutting edge of such technologies as artificial intelligence, speech synthesis, wireless communications, and networked virtually reality, according to the article. “Ultimately, technology from toys could transform the way business is conducted in every industry,” the article says. Already the Army is investing in these systems at the Institute for Creative Technologies, and DARPA is funding research efforts at Carnegie Mellon University.

Unreliable Innovation Investments—Companies invest sporadically in innovation with boom and bust cycles the historical norm, according to a new article in the *Harvard Business Review*. These cycles axe good and bad ideas indiscriminately, leaving closed labs, frayed partnerships and leave firms off-guard, when new disruptive ideas emerge. To enable innovation to become as important to companies as quality, the entire process must be overhauled, according to John Wolpert, who leads IBM’s Extreme Blue innovation center. Innovation must be made an open process, no longer confined to the realms of corporate secrecy. “Only then will it be protected from both the ax of short-term cost reduction and the faddishness born of easy money,” Wolpert writes.

Wild Aid Riles the Jungle—Environmental groups are embracing military techniques to enforce poaching and protect endangered species in many parts of the globe. One group is called WildAid, which offers to train government forest rangers in western law enforcement and military tactics in order to boost local anti-poaching efforts, according to an article in the *New York Times Sunday Magazine*. Funded by the Barbara Delano Foundation, WildAid uses ex-military personnel as trainers and has enjoyed some success in Siberia, Thailand, Cambodia and the Galapagos Islands. The State Dept. awarded the group an \$80,000 grant to further their efforts.

Science Openness and Terrorism—The role of science and research after September 11, and the delicate balance between openness and secrecy in research, is addressed in a new book by the American Association for the Advancement of Science. The six chapters of the book, *Science and Technology in a Vulnerable World*, address such issues as the contribution science is making to the war on terrorism; how to ensure that science does not aid terrorism inadvertently; and the psychology of risk. The book is intended to



“stimulate a broader dialogue concerning the responsible conduct and use of science and technology in the new era of security concerns.”

Mega-Enterprise Transformation—Success in implementing large systems integration across large organizations has a checkered history, according to an article in *CSC World* magazine. While much attention is focused on the information technology component, what is really required is attention on “enterprise transformation” to meet overall goals. Four variables are critical, according to the article. These are: enterprise mission success should drive transformation; the information technology operating model must be synchronized with the governance model; the transformation program content should be adapted to the business entity content; and success is defined by the IT impact on the business entity value propositions.

Leapfrogging Moore’s Law—Israeli startup Lenslet Labs is developing an optical signal processor that could upend Moore’s law by running a thousand times faster than today’s generation of digital signal processors, according to an article in *Red Herring* magazine. The product, dubbed EnLight256, is expected to be available next year. The chip is also expected to process algorithms more efficiently than electrical-based chips.

Silent Commerce Technology—Radio frequency identification (RFID) is an example of “silent commerce” that companies are using to increase efficiency, according to a new report from Accenture on the technology. Companies like ExxonMobil, Ford, Marks and Spencer and Shell, are already making good use of RFID. Other examples of silent commerce include GPS and micro-electromechanical systems. Silent commerce could be potentially as important as the Internet to future businesses.

NOTE: Transformation Trends is provided as a means to highlight new and emerging issues in defense and commercial realms to key decision-makers and in no way constitutes endorsement or official recognition of any idea, concept or program.

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